ARIZONA STATE RETIREMENT SYSTEM

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Paul Matson
Director

SUMMARY OF THE PUBLIC MEETING OF THE ARIZONA STATE RETIREMENT SYSTEM INVESTMENT COMMITTEE

HELD ON
Tuesday, October 12, 2010
2:30 p.m.

The Investment Committee (IC) of the Arizona State Retirement System (ASRS) met at 3300 N. Central Avenue, 14th Floor Conference Room, Phoenix, Arizona 85012. Mr. Tom Connelly, Chair of the IC, called the meeting to order at 2:30 p.m.

1. Call to Order; Roll Call; Opening Remarks

Present: Mr. Tom Connelly, Chair
Mr. Chris Harris, Vice-chair (via telephone)
Mr. Larry Trachtenberg (arrived after agenda item #2)
Prof. Dennis Hoffman (via telephone)

Absent: None

A quorum was present for the purpose of conducting business.

2. Approval of Minutes of the August 16, 2010 Public IC Meetings

Motion: Mr. Christopher Harris moved the minutes of the August 16, 2010 Public IC meetings be adopted as presented. Prof. Dennis Hoffman seconded the motion.

By a vote of 3 in favor, 0 opposed, 0 abstention, and 1 excused, the motion was approved.

3. Presentation, Discussion, and Appropriate Action Regarding Risk Parity Strategies

Mr. Gary Dokes, Chief Investment Officer, introduced the topic and provided background information regarding Risk Parity. Mr. Dokes asked that the IC consider taking one of the following actions: 1) move to not implement risk parity, or 2) move to direct staff to initiate a risk manager search and return to the IC with a recommended percentage allocation within the ASRS Strategic Asset Allocation (SAA) Risk Parity 0-10% policy range.

Mr. Gary Dokes informed the IC that Chris Levell, NEPC would begin the discussion of risk parity; Mr. Greg Allen, President of Callan Associates would participate via conference call; and Mr. Ben Inker, Director of Asset Allocation at GMO was available via conference call in the event the IC wanted to speak with him.

Mr. Christopher Levell outlined the NEPC presentation on Risk Parity. Mr. Levell posited that the IC was familiar with the concept of risk parity and that he would initially address some of the criticisms of Risk Parity. Mr. Levell highlighted that the Risk Parity is a fundamentally sound investment strategy attempting to achieve the best risk/reward ratio portfolio. Most of the criticism as noted in academic work and Ben Inker's paper primarily centers around the risk of an equally weighted portfolio and its use of leverage. As a firm, NEPC favors funds having a relatively low equity asset class exposure, allocations to risk parity strategies and some relaxing of constraints, such as leverage, which would allow for portfolios to be constructed more efficiently.

Mr. Levell presented data of historical expectations showing asset class risk reward ratios and further explicated risk parity strategies using the State of Wisconsin as an example. Mr. Levell briefly discussed the differences between Risk Parity portfolios and the Tobin Separation Theorem as brought up by Mr. Connelly, stating that the Tobin Separation Theorem was a very different portfolio strategy.

Mr. Levell reiterated that leverage is the key component of risk parity as noted in Mr. Inker's GMO paper; however, leverage can help equalize portfolio risk and contends it can effectively be managed. Mr. Levell stated NEPC's opinions of the pros and cons of Risk Parity:

> Pros: Risk Parity, allocates risk across diverse beta (market) exposures that, in aggregate, exhibit low correlations to any particular asset class (e.g., public equities) or economic environment.
>
> Against: Leverage is required; counterparty and transparency risks may exist; and practical implementation may pose difficulties.

Mr. Allen, Callan Associates, asked to share his thoughts at this time, given his limited availability for the balance of this agenda item. Mr. Allen stated that he distinguished Callan's position from NEPC's, in that, Callan is a bit more ambivalent about risk parity. Callan is concerned about "maverick risk" and the example of the risk associated with an $85 billion public fund levering up its fund by 20%. Mr. Allen said that putting a small amount, say 5%, in risk parity will likely not do much harm nor good. Implementing risk parity on a total fund level is not a sustainable approach.

Mr. Allen agreed that equal risk is arbitrary and that many investment managers have jumped on the risk parity bandwagon more because of its popularity. Privately, they would probably say they are not trying to achieve an equally risk weighted portfolio but rather want to take unequal risk based on their market views.

Mr. Allen disagreed with the notion to fund risk parity solely from equities and would rather fund it pro-rata from stock, bonds, other asset classes. He is very concerned about funds taking equity exposure off the table at this time. Mr. Allen thinks equities provide favorable long-term returns for pension funds and advises not to exchange them for a mix of assets with lower returns and then add leverage.

Mr. Allen stressed the importance of resisting benchmarking risk parity to a fund's aggregate policy benchmark; he recommended using a mix of the underlying strategy assets given some long-term normal level of leverage. A fund should be aware of the existing level of short-term interests; an increase in short rates would likely make risk parity strategy performance look less favorable to the fund's aggregate benchmark performance.

Mr. Allen stated that his analyses showed that a levered risk parity portfolio would have significantly underperformed the typically institutional portfolio during the 1990's and would have significantly outperformed during the last decade. Over the entire 20-year period since 1990, a levered risk parity portfolio that delivered an 8.25% annual return would have done so with approximately half the volatility of an unlevered Efficient Frontier portfolio with the same return. Mr. Allen concluded his comments by saying that in practice, scalability would be a meaningful implementation issue.

Mr. Dokes asked Mr. Steven McCourt, Managing Principal, Meketa, to discuss his opinion on the subject matter. Mr. McCourt stated that Risk Parity is built off a flawed model; especially noting that major imperfections express themselves during tail events and that risk parity tends to respond to tail events. Mr. McCourt stated that the simplification of assumptions do not reflect reality and that leverage is present at the asset class level and are magnified when employed at the total fund level.

Mr. Connelly asked staff for their opinion on Risk Parity. Mr. Dokes said he does not favor risk parity for the following three reasons:

1. There is no free market lunch; enhanced "leverage" beta strategies are temporal and does not reflect the optimal long-term portfolio efficient portfolio.
2. Significant implementation and operational risk exist.
3. Reduction in equity exposure will likely hinder ASRS' ability to achieve its long-term 8% rate of return Total Fund performance expectation.

Mr. Matson commented that risk parity is an intriguing, but not dominant, idea to apply at the total fund level; however, application of risk parity at the portfolio level is less logical. Mr. Matson also stated that the ASRS would likely be better served focusing on other areas of investments.

Mr. Hoffman, Mr. Harris, and Mr. Trachtenberg concurred with views offered by staff.

Motion: Mr. Larry Trachtenberg moved to not implement a risk parity strategy. Prof. Dennis Hoffman seconded the motion.

By a vote of 4 in favor, 0 opposed, 0 abstentions, and 0 excused, the motion was approved.

Note: Mr. Inker, GMO was not called upon to contribute to the discussion.

4. Presentation, Discussion and Appropriate Action Regarding The ASRS Long Term Disability (LTD) Program

The purpose of this agenda is to present and discuss the Director and CIO's recommended modifications to the ASRS Long Term Disability (LTD) program and ASRS Strategic Investment Policy #004 regarding the rebalancing of ASRS LTD Program assets. If approved by the IC, the topic will be presented to the full Board for approval in November. Mr. Dokes proceeded to introduce Mr. Eric Glass, Portfolio Analyst, ASRS.

Mr. Gary Dokes stated the rationale for the recommendations:

1. Improve the LTD program cash-flow liquidity and rebalancing flexibility.
2. Reduce fees and improve anticipated fund performance.
3. Better SAA policy alignment to the ASRS Plan asset allocation policy.

Mr. Glass addressed Mr. Connelly's request for clarification about BlackRock's alpha tilts investment modules.

Motion: Mr. Larry Trachtenberg recommended as noted in memorandum to carry the following recommendations to the full Board for consideration: Modifications to ASRS LTD Strategic Asset Allocation (SAA) as noted in red in Exhibit 1, and Modifications to ASRS Strategic Investment Policy #004 regarding the rebalancing of ASRS LTD Program assets. (Exhibit 2). Mr. Chris Harris seconded the motion.

By a vote of 4 in favor, 0 opposed, 0 abstentions, and 0 excused, the motion was approved.

5. Presentation, Discussion, and Appropriate Action Regarding Hedge Fund Strategies

The Committee Secretary clarified that the agenda contains a clerical error which states this item is an action item. It is an informational only item.

Mr. Dokes provided a brief background of the Hedge Fund discussion, and stated that this item was brought to the Committee by an IC Trustee's request to discuss recent meaningful developments within the direct and fund-of-funds hedge fund industry. Mr. Trachtenberg requested clarification of alignment of interest. Mr. Dokes responded saying that modifying contract terms such as GP co-investment levels, lower preferred rate and management fee structures should provide better alignment of interest for the ASRS.

Mr. Levell presented his discussion, again noting that the presentation was educational, and that their institutional tracking of Hedge Funds is strong. NEPC believes that an appropriate place for hedge funds (as well as for risk parity) exists in a public fund portfolio. Mr. Levelle expressed that hedge funds are the purest expression of oblique asset management and that some data performance bias exist.

Mr. Levell then discussed Long/Short Equity strategies and noted there exists a strong case to implement such a strategy. Mr. Levelle further discussed the headline risk challenges of investing in hedge funds.

Mr. Dokes requested Mr. McCourt to address Meketa's presentation as reference; Mr. McCourt noted that this conversation was a very different conversation from that of risk parity. Mr. Dana, Senior Associate at Meketa, noted operational risks exist when investments in illiquid securities and the impact of short selling occur simultaneously.

Mr. Connelly recommended that the discussion of hedge funds continue at a future IC meeting.

6. Presentation, Discussion and Appropriate Action Regarding the Investment Management Division's (IMD) House Views

Mr. Dokes introduced the topic and provided the IC with a brief overview of the Investment Management Division's House Views. Since the prior IC meeting, no significant changes have been made to the Equity, Fixed Income, Opportunistic, Real Estate or Private Equity Investment House Views. Notable changes in market metrics or asset class positioning relative to SAA targets from the previous month are highlighted in red.

7. Presentation, Discussion, and Appropriate Action Regarding Director's Asset Class Committee Update

Mr. Dokes provided the IC with a brief update regarding recent activities with the ASRS Private Equity Committee (PEC), Real Estate Committee (REC), Opportunistic Investment Committee (OIC) and Public Equity/Fixed Income Markets Committee (PMC). Mr. Dokes mentioned that a non-U.S. Equity Large and Small Cap manager was underway.

8. Future Agenda Items

Mr. Dokes said that the topics such as the Investment Policy Statement (IPS) and the 8% long term rate of return ASRS investment program performance objective will be discussed over the next few months.

9. Call to the Public

No members of the public requested to speak; the meeting adjourned at 5:47 p.m.

Respectfully submitted,

Regina Landeros-Thomas, Secretary Date

Gary R. Dokes, Chief Investment Officer Date